2015

Quality Improvement Models, 2015: WPAFB

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Quality Improvement Models 2015

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2015

What is Quality Improvement?

Quality Improvement is a formal approach to the analysis of performance and systematic efforts to improve it. There are numerous models used. We will look at some commonly used models in HealthCare

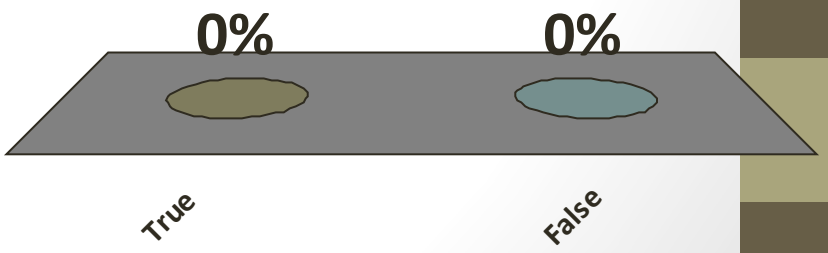
QI involves both prospective and retrospective reviews. It is aimed at improvement -- measuring where you are, and figuring out ways to make things better. It specifically attempts to avoid attributing blame, and to create systems to prevent errors from happening. (QA, CQI, TQI)

http://patientsafetyed.duhs.duke.edu/module_a/introduction/contrasting_qi_qa.html

I can list 3 Quality Projects currently going on in my residency Program.

A. True

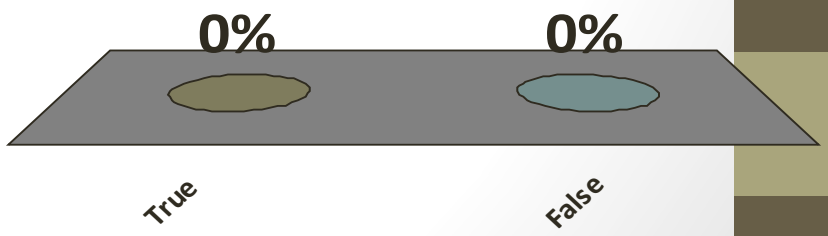
B. False



I am able to articulate how the work that I do Impacts Premier's Quality Scorecard

A. True

B. False

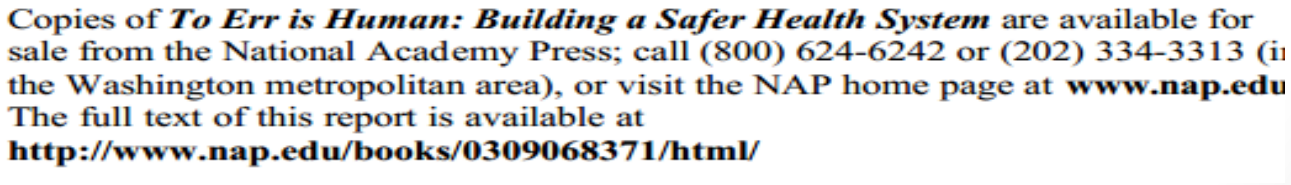


Quality & Safety- How did we get Here?

IOM in 1999, "*To Err is Human: Building a Safer Health System.*"

- Tens of thousands of Americans die each year as a result of preventable errors.

- Comprehensive strategy for how healthcare providers, government, industry, and consumers can reduce medical error.



"Crossing the Quality Chasm: A New Health System for the 21st Century"

- The next report by the IOM, which asserts that the gap between the care we now provide and the care we should give is not just a gap but a "chasm."

Factors contributing to the Chasm:

- Technology advancing at unprecedented rate
- Complexity of health care

Copies of ***Crossing the Quality Chasm: A New Health System for the 21st Century*** are available for sale from the National Academy Press; call (800) 624-6242 or (202) 334-3313 (in the Washington metropolitan area), or visit the NAP home page at **www.nap.edu.** The full text of this report is available at **http://www.nap.edu/books/0309072808/html/**

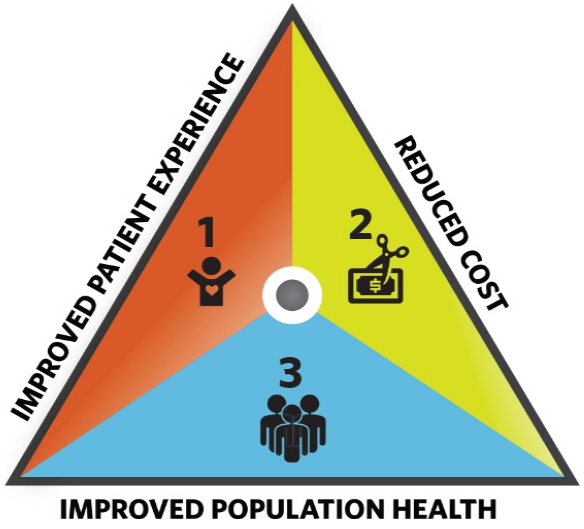
Factors influencing Chasm (cont.)

- Rapid changes impede translation of knowledge into practice
- Americans living longer
- Aging population = increased prevalence of chronic conditions
- Focus on acute care verses prevention/primary care
- Care is Fragmented and uncoordinated

Quality Chasm cont…
Six Aims for Improvement

- Safe
- Effective
- Patient-centered
- Timely
- Efficient
- Equitable

IHI's ***Triple AIM***



Quality Chasm Cont… Ten Rules for Redesign

- Care based on healing relationships
- Care is customized according to pt. needs and values
- Pt. is source of control
- Pt. has unrestricted access to their info.
- Safety is a system priority

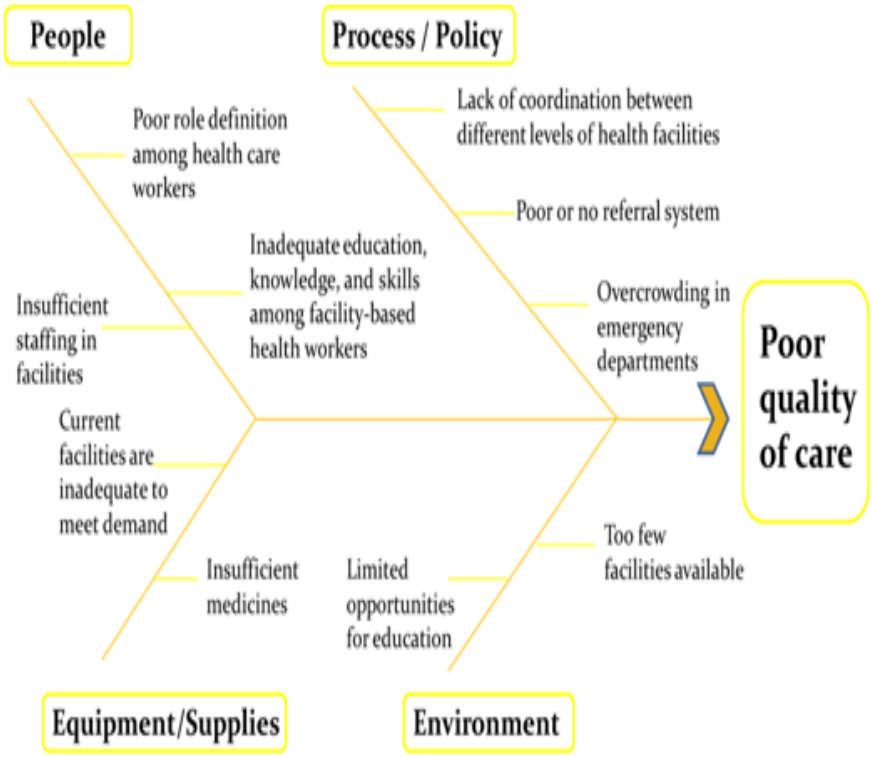
Rules (cont.)

- Decision making is evidence-based
- Transparency is necessary
- Needs are anticipated
- Waste is decreased
- Cooperation among clinicians is a priority

Reports have led us to a Pay 4 Performance environment with a focus on Six Sigma Quality Models for Process Improvement.

Fishbone Diagram Kaoru ISHIKAWA Diagram

A fishbone diagram helps leaders identify multiple causes of a single problem. The diagram takes its name from its shape, which resembles the skeleton of a fish, as shown in the diagram below:



Six Sigma / DMAIC – Edwards Deming

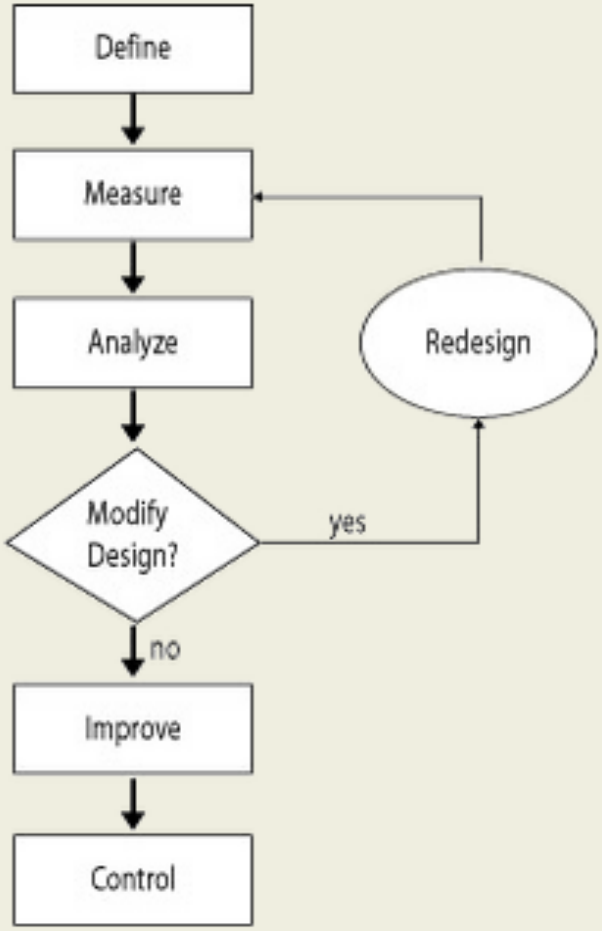
DMAIC is a data-driven quality strategy used to improve processes. It is an integral part of a Six Sigma initiative, but in general can be implemented as a standalone quality improvement procedure or as part of other process improvement initiatives such as lean.

DMAIC is an acronym for the five phases that make up the process:

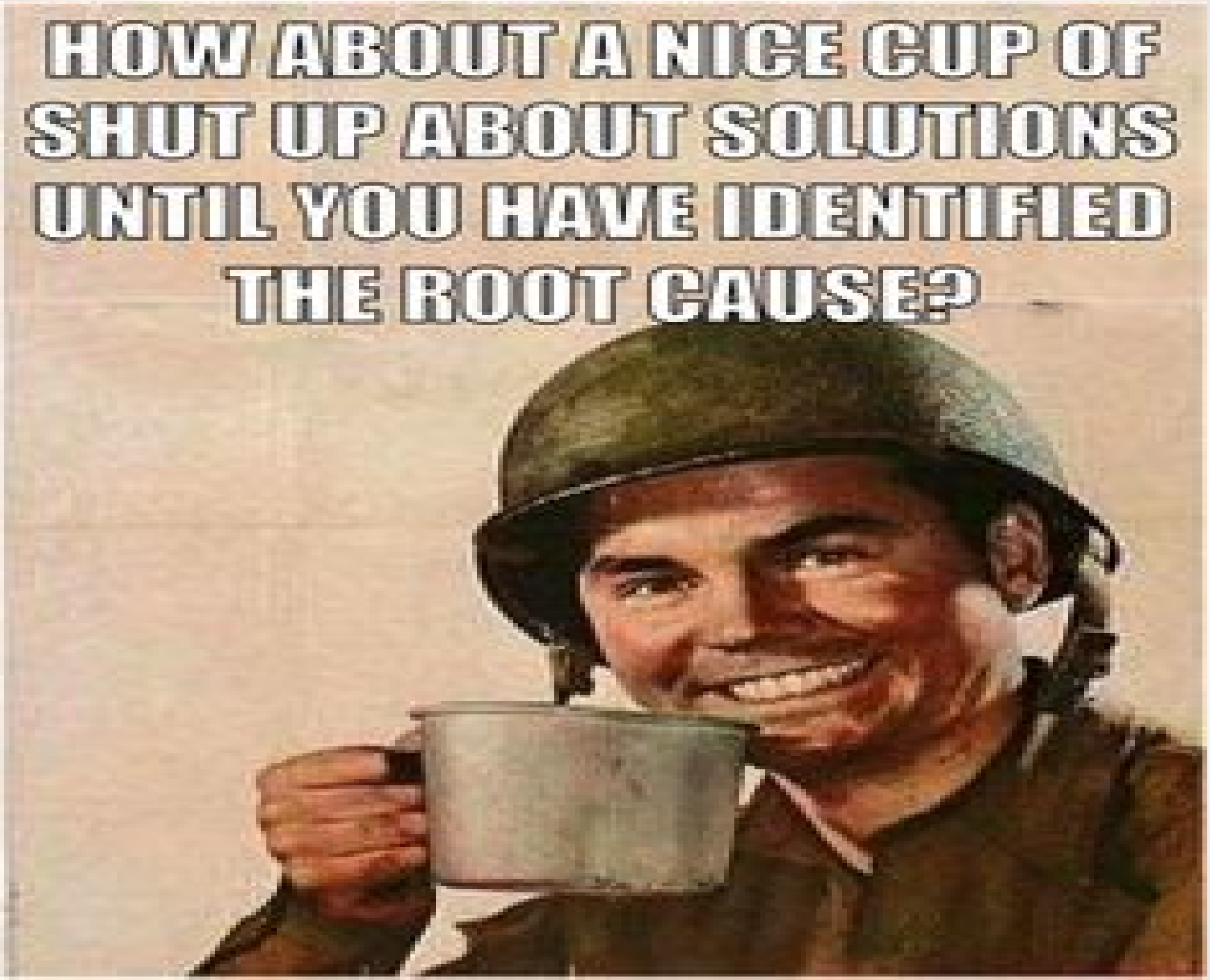
- **Define** the problem, improvement activity, opportunity for improvement, the project goals, and customer (internal and external) requirements.
- **Measure** process performance.
- **Analyze** the process to determine root causes of variation, poor performance (defects).
- **Improve** process performance by addressing and eliminating the root causes.
- **Control** the improved process and future process performance.

The DMAIC process easily lends itself to the project approach to quality improvement encouraged and promoted by Juran.

Excerpted from *The Certified Quality Engineer Handbook, Third Edition*, ed. Connie M. Borror, ASQ Quality Press, 2009, pp. 321–332.




I DON'T ALWAYS ASK "WHY?"
BUT WHEN I DO, I ASK IT 5 TIMES
memegenerator.net


HOW ABOUT A NICE CUP OF SHUT UP ABOUT SOLUTIONS UNTIL YOU HAVE IDENTIFIED THE ROOT CAUSE?

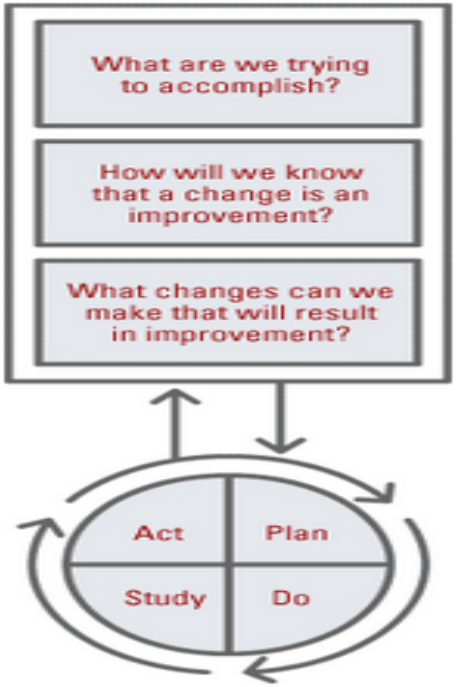
The PDSA Model – Dr. Edwards Deming

How to Improve

IHI uses the Model for Improvement as the framework to guide improvement work. The Model for Improvement,* developed by Associates in Process Improvement, is a simple, yet powerful tool for accelerating improvement. This model is not meant to replace change models that organizations may already be using, but rather to accelerate improvement.

Learn about the fundamentals of the Model for Improvement and testing changes on a small scale using Plan-Do-Study-Act (PDSA) cycles.

- Introduction
- Forming the Team
- Setting Aims
- Establishing Measures
- Selecting Changes
- Testing Changes
- Implementing Changes
- Spreading Changes



*Source:
Langley GL, Moen R, Nolan KM, Nolan TW, Norman CL, Provost LP. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (2nd edition). San Francisco: Jossey-Bass Publishers; 2009.

PDSA Worksheet

PDSA Worksheet for Testing Change

Aim: (overall goal you wish to achieve)

Every goal will require multiple smaller tests of change

Describe your first (or next) test of change:	Person responsible	When to be done	Where to be done

Plan

List the tasks needed to set up this test of change	Person responsible	When to be done	Where to be done

Predict what will happen when the test is carried out	Measures to determine if prediction succeeds

Do **Describe what actually happened when you ran the test**

Study **Describe the measured results and how they compared to the predictions**

Act **Describe what modifications to the plan will be made for the next cycle from what you learned**

FMEA Tool

Sample Failure Mode, Effect, and Criticality Analysis for Hypothetical Medication Use Process in O.R.

Process	Pharmacy	Dispense	O.R.	Transfer	Sterile field	Administer	Patient
Potential failure modes	Look-alike drugs Multiple concentrations	Wrong drug Wrong concentration		Switched drugs Contamination		Wrong drug Wrong dose	
Potential effect on patient	8	8		10		10	
Frequency of failure mode	7	3		2		3	
Likelihood of reaching patient	3	4		6		10	
Criticality of failure mode	168	96		120		300	
Root causes	Open formulary Ambiguous labels	Alphabetical storage Ambiguous labels		Unnecessarily complex process Approved procedure not consistently followed		No means of verifying drug/dose after transfer to sterile field	
Strategies	P&T Committee review/redesign of formulary content & process	Redesign storage system. Introduce bar coding.		Simplify procedure. Eliminate open-vessels for IV drugs. Monitor compliance.		No action needed. Risk eliminated earlier in process.	

Use the interactive Failure Modes and Effects Analysis Tool on IHI.org (http://www.IHI.org/ihi/workspace/tools/fmea/) to create your FMEA, automatically calculate the risk priority number (RPN) of your process, evaluate the impact of process changes you are considering, and track your improvement over time.

GOAL is to **proactively** reduce risk

Control Charts- Walter Shewart

"Variation is the Enemy of Quality Control"

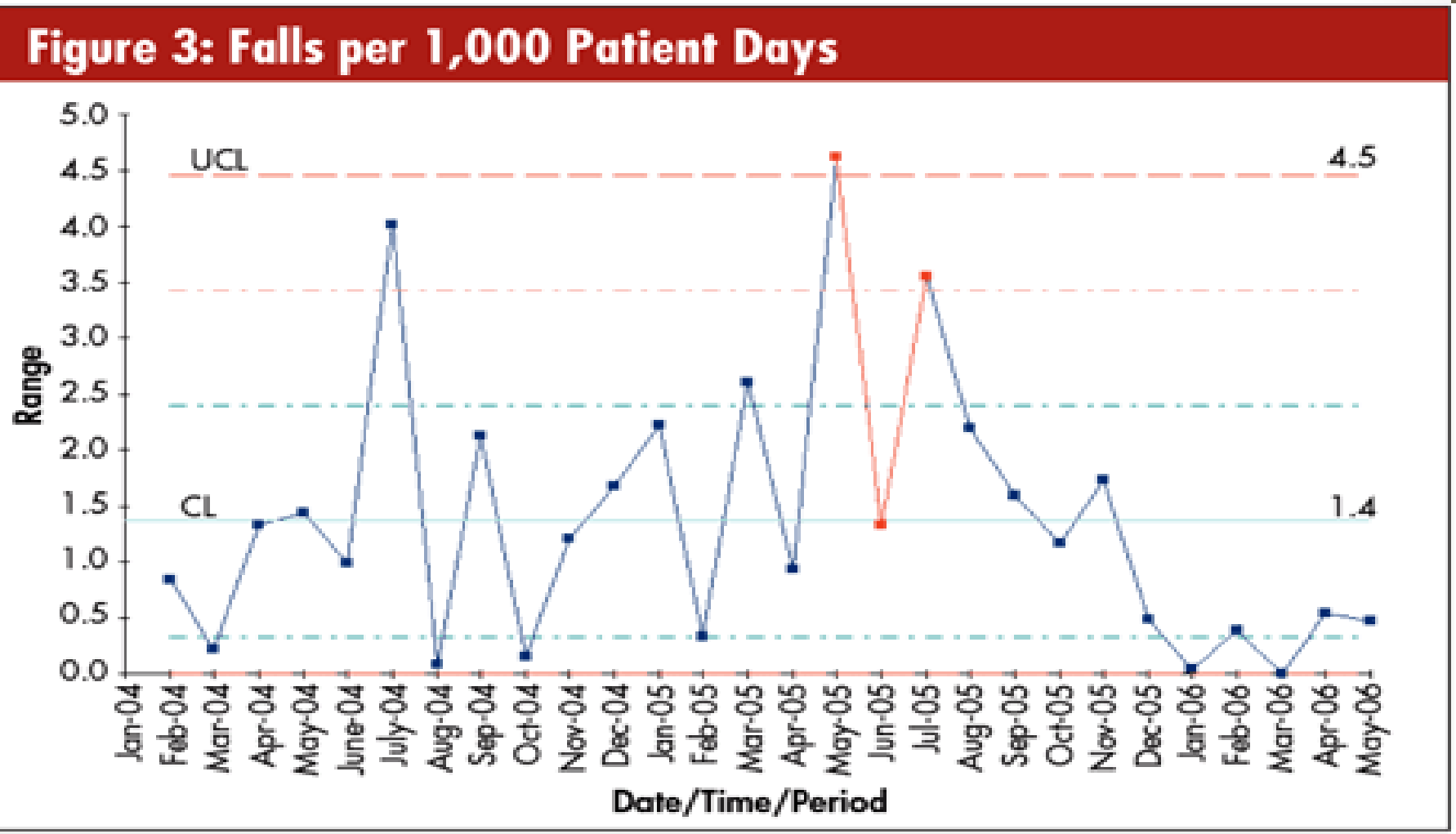


FIGURE 2 | The 'Swiss Cheese' model proposed by James Reason demonstrates how gaps in culture, defenses barriers, and safeguards align and permit errors to propagate unchecked, leading to harm.[167]

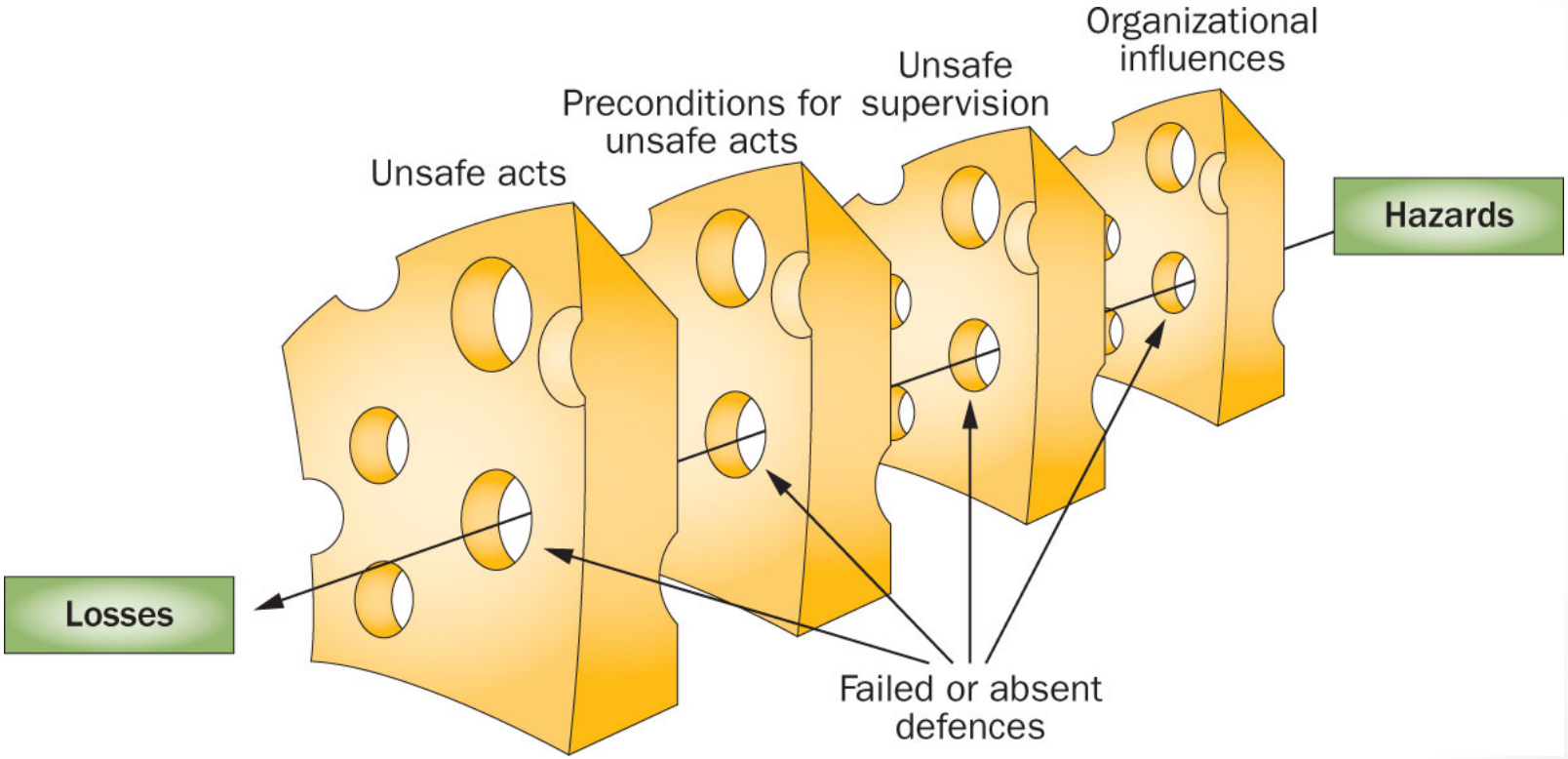
FROM THE FOLLOWING ARTICLE:

Safety in the operating theatre—a transition to systems-based care

Thomas G. Weiser, Michael P. Porter & Ronald V. Maier

Nature Reviews Urology **10**, 161-173 (March 2013)

doi:10.1038/nrurol.2013.13



Swiss Cheese in Healthcare

"…poorly designed work schedules, lack of teamwork, variations in the design of important equipment between and even within institutions—are sufficiently common that many of the slices of cheese already have their holes aligned. In such cases, one slice of cheese may be all that is left between the patient and significant hazard."

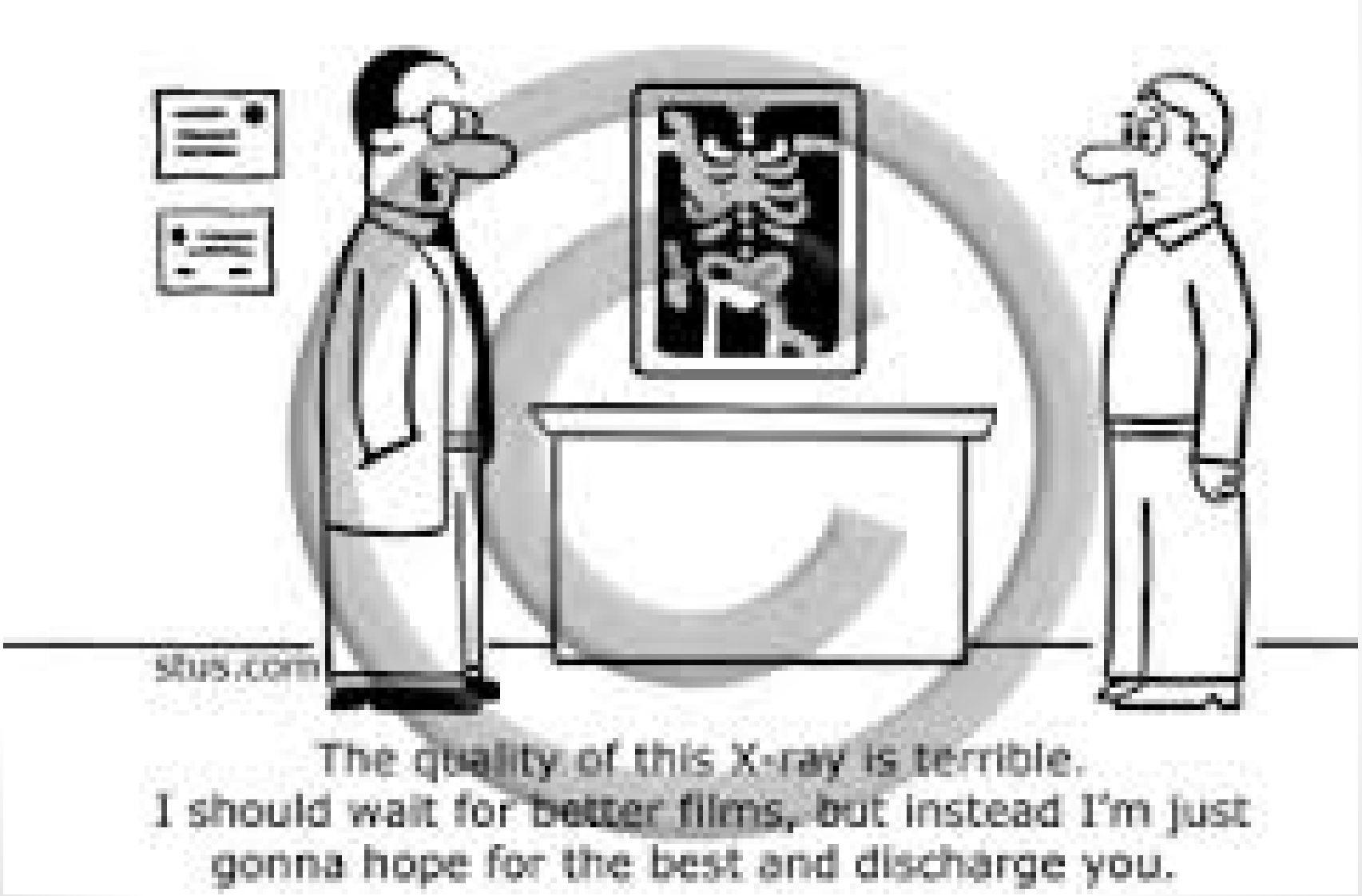
Source: http://www.psnet.ahrq.gov

Creating a "Just Culture…"

Shared accountability in managing risk, identifying and encouraging opportunities for incident-reporting to promote growth and learning, and implementation of findings to improve quality and safety. It's about asking what happened, Why did it happen, and How can we prevent it from happening again? It's also about assessing "at risk" behaviors where risk may not have been recognized or mistakenly believed not to have been there. This requires coaching. Finally "Reckless Behavior*", a very small percentage of cases*, where guidelines, protocols, and risks were known but ignored or over-looked. This behavior requires remediation.

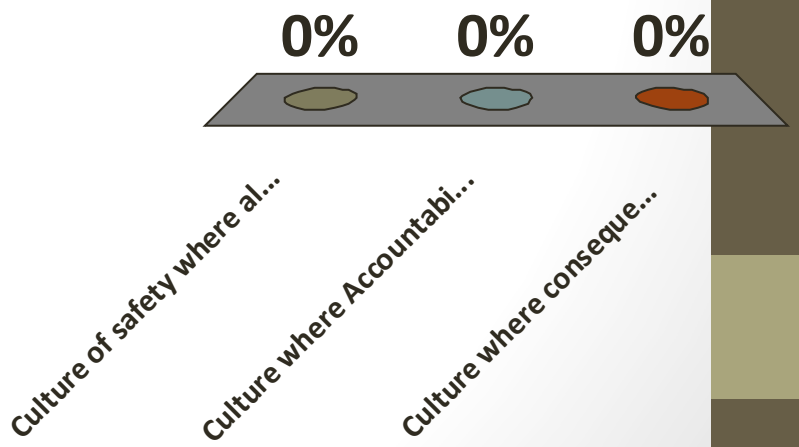
Taken from IHI Website- Thomas Nolan and James Reason.

Negligent or Reckless?



Which of the following best describes a *Just Culture*?

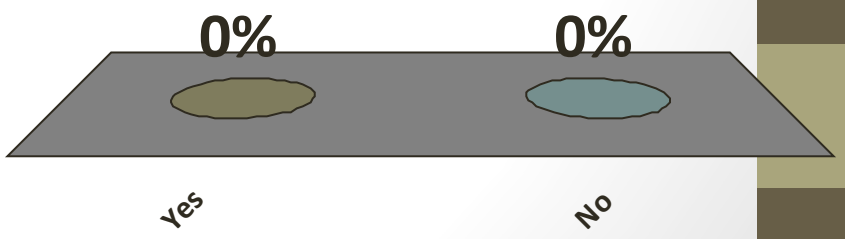
A. Culture of safety where all staff are treated equally
B. Culture where Accountability & “no blame” are balanced
C. Culture where consequences match the severity of the error / incident



N ENGL J MED 361;14 NEJM.ORG OCTOBER 1, 2009

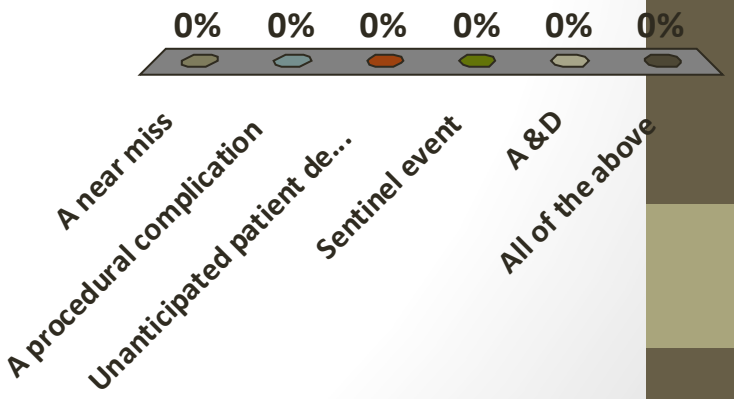
Do You Believe you Practice in a "Just Culture?"

A. Yes
B. No

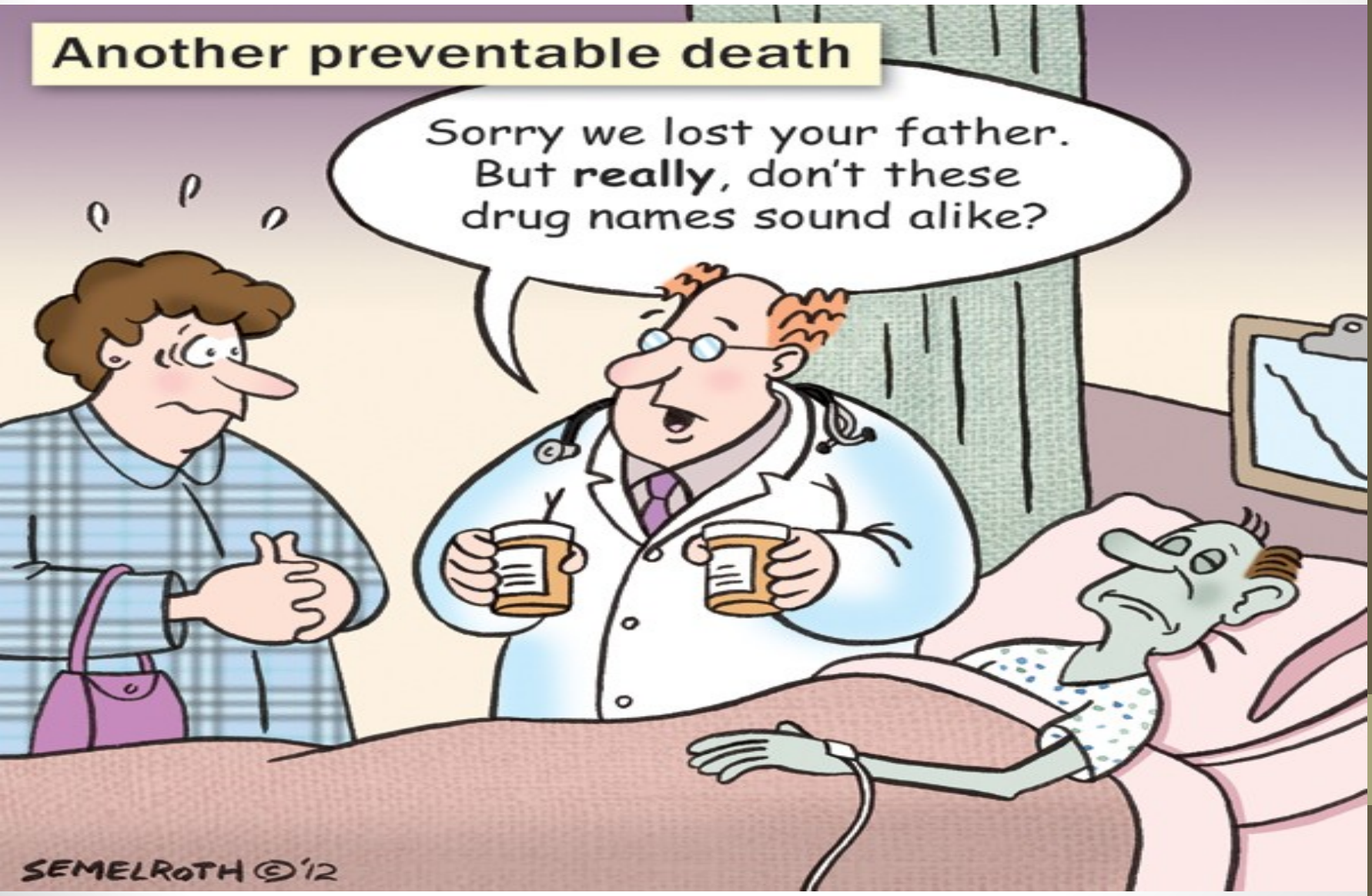


Which of the following are reportable incidents?

A. A near miss
B. A procedural complication
C. Unanticipated patient deterioration
D. Sentinel event
E. A &D
F. All of the above

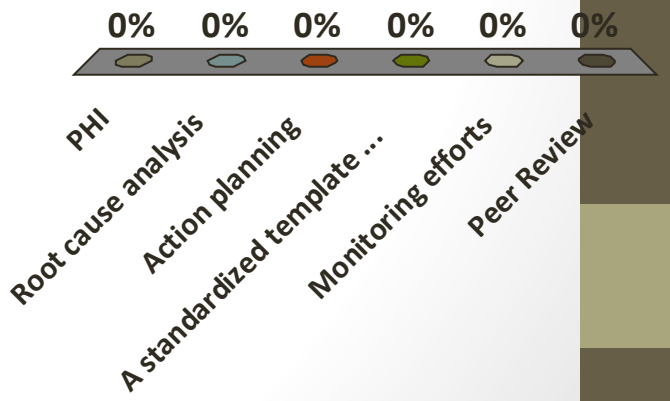


What Happened, why did it happen, and how can we prevent it from happening again?

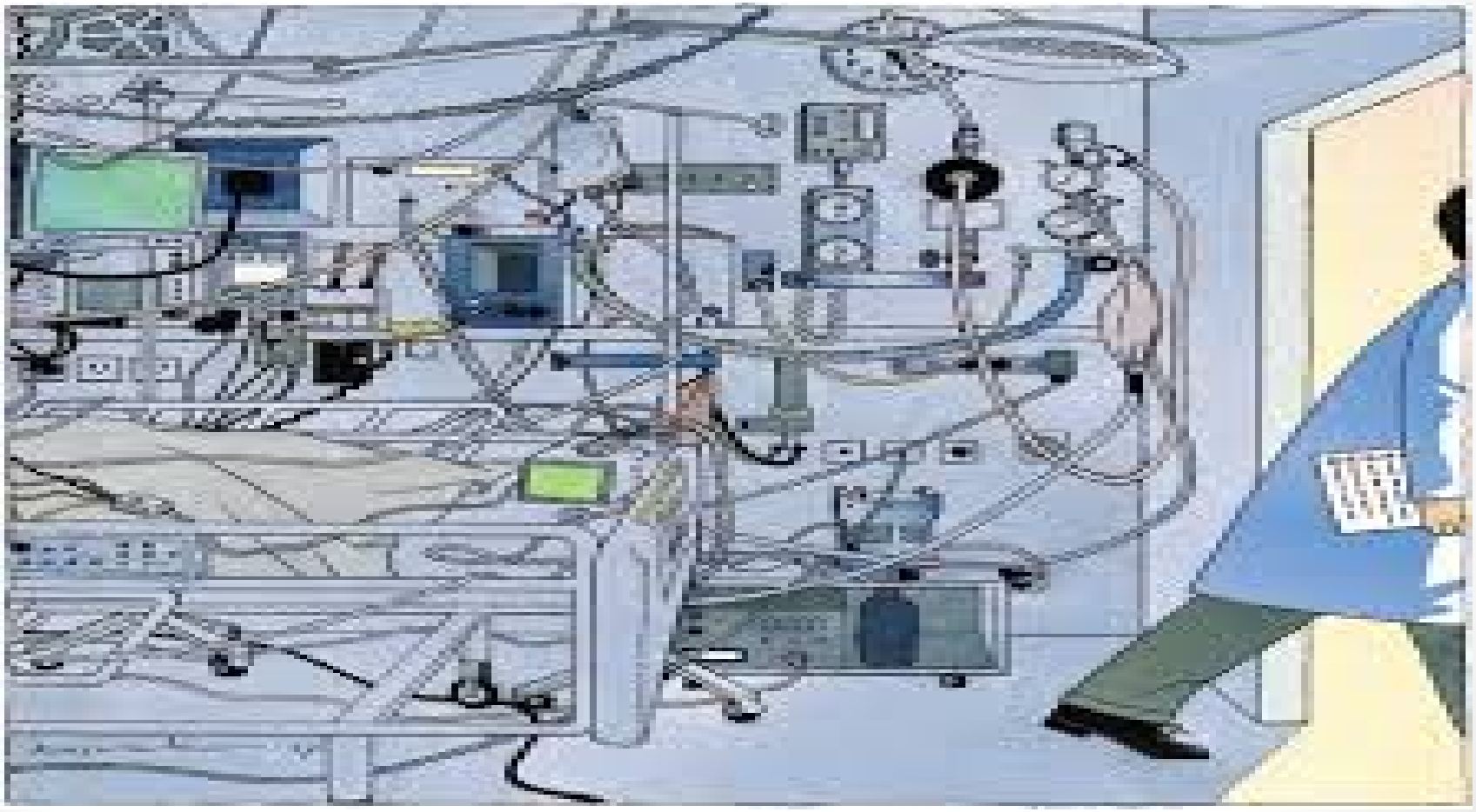


Morbidity and Mortality Conference Discussions should include all of the following elements ***except***:

A. PHI (Protected Health Info.)
B. Root cause analysis
C. Action planning
D. A standardized template for discussion
E. Monitoring efforts
F. Peer Review

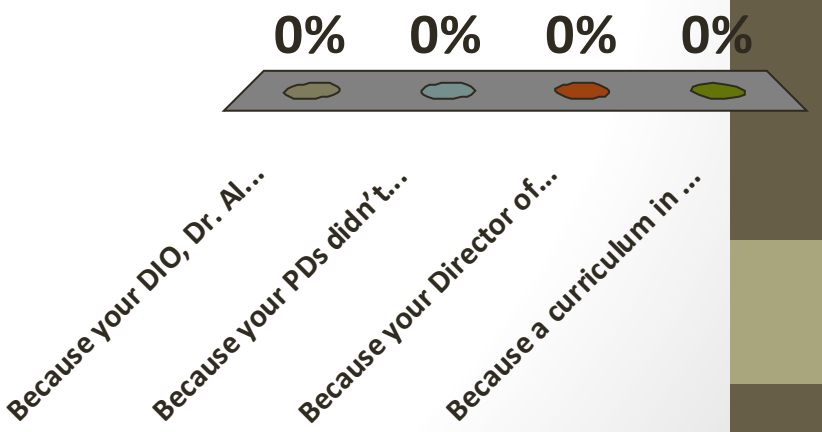


We practice in a complex world…



Why are you being required to complete 23 IHI Modules in Q&S?

A. Because your DIO, Dr. Albert Painter, thought it was a good idea
B. Because your PDs didn't want to teach it
C. Because your Director of PSQI for GME had nothing better to do
D. Because a curriculum in patient safety & QI is required by ACGME and the RRC / Milestones.



Individual Quality Scorecard

- Priorities
- Review of results